AMENDMENTS TO THE CLAIMS

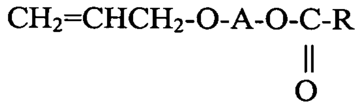
Claims 1-10 (canceled)

Claim 11 (original): A cement dispersant comprising graft copolymers and/or salts thereof obtained by a first process, a second process and a third process;

said first process being wherein an esterification reaction is carried out with α-allyl-ω-hydroxy-polyoxyalkylene shown by Formula 1, refined so as to have a peroxide value less than 5.0meq/kg, and aliphatic monocarboxylic acid shown by Formula 2, in the absence of any solvent and in the presence of antioxidant and under a heated and reduced-pressure condition by using an acid catalyst and distilling away generated water:

$CH_2{=}CHCH_2\text{-}O\text{-}A\text{-}OH$ (Formula 1)

$R\text{-}COOH$ (Formula 2)



$CH_2{=}CHCH_2\text{-}O\text{-}A\text{-}O\text{-}\underset{\underset{O}{\|}}{C}\text{-}R$ (Formula 3)

where R is alkyl group with 1-6 carbon atoms and A is residual group obtained by removing all hydroxyl groups from polyalkyleneglycol of which the repetition number of oxyalkylene units, consisting either only of oxyethylene units or of both oxyethylene units and oxypropylene units, is 2-250;

said second process being wherein vinyl copolymers are obtained by a radical copolymerization reaction of the allyletherester monomer obtained in said first process and maleic anhydride; and

said third process being wherein graft copolymers are obtained by a graft reaction of the vinyl copolymers obtained in said second process and polyoxyalkylene monoalkylether and/or polyoxyalkylene monoalkylester.

Claim 12 (original): The cement dispersant of claim 11 wherein said peroxide value is less than 3.0meq/kg.

Claim 13 (original): The cement dispersant of claim 12 wherein the α-allyl-ω-hydroxy-polyoxyalkylene used in said first process is refined by using an adsorbent containing aluminum oxide and/or magnesium oxide.

Claim 14 (original): The cement dispersant of claim 13 wherein said esterification reaction in said first process is carried out with α-allyl-ω-hydroxy-polyoxyalkylene and aliphatic monocarboxylic acid at molar ratio of 1/1.1-1/2.5 and after the esterification reaction, the excess portion of aliphatic monocarboxylic acid is distilled away.

Claim 15 (original): The cement dispersant of claim 14 wherein said antioxidant used in said first process is one or more selected from the group consisting of hydroquinone, dibutylhydroxytoluene and triphenyl phosphite, and said oxidant is present in an amount corresponding to 0.005-0.15 weight % of α-allyl-ω-hydroxy-polyoxyalkylene.

Claim 16 (original): The cement dispersant of claim 15 wherein said esterification reaction is carried out at 100-135°C and 80-0.5kPa.

Claim 17 (original): The cement dispersant of claim 15 wherein said esterification reaction is carried out while increasing temperature gradually or in a stepwise manner within at 100-135°C and reducing pressure gradually or in a stepwise manner within 80-0.5kPa.

Claim 18 (original): The cement dispersant of claim 17 wherein said acid catalyst is used in an amount of 0.1-1.5 weight % of the total of α-allyl-ω-hydroxy-polyoxyalkylene and aliphatic monocarboxylic acid.

Claim 19 (original): The cement dispersant of claim 18 wherein A in Formulas 1 and 3 includes only oxyethylene units

Claim 20 (original): The cement dispersant of claim 19 wherein said aliphatic monocarboxylic acid is selected from the group consisting of acetic acid and propionic acid.

Claim 21 (original): The cement dispersant of claim 20 wherein said radical copolymerization reaction in said second process is carried out in the presence of a radical polymerization initiator with a mixture of radical copolymerizable monomers containing allyletherester monomers and maleic anhydride in molar ratio of 20/80-50/50 to obtain vinyl copolymers with number-average molecular weight in the range of 3000-50000.

Claim 22 (original): The cement dispersant of claim 21 wherein said graft reaction in said third process is carried out in the presence of amine catalyst with 100 weight parts of the vinyl copolymers and 1-40 weight parts of polyoxyalkylene monoalkylether and/or polyoxyalkylene monoalkylester having block addition of a total of 2-10 moles of ethylene oxide and propylene oxide to 1 mole of aliphatic alcohol with 1-6 carbon atoms and/or aliphatic carboxylic acid with 1-6 carbon atoms.